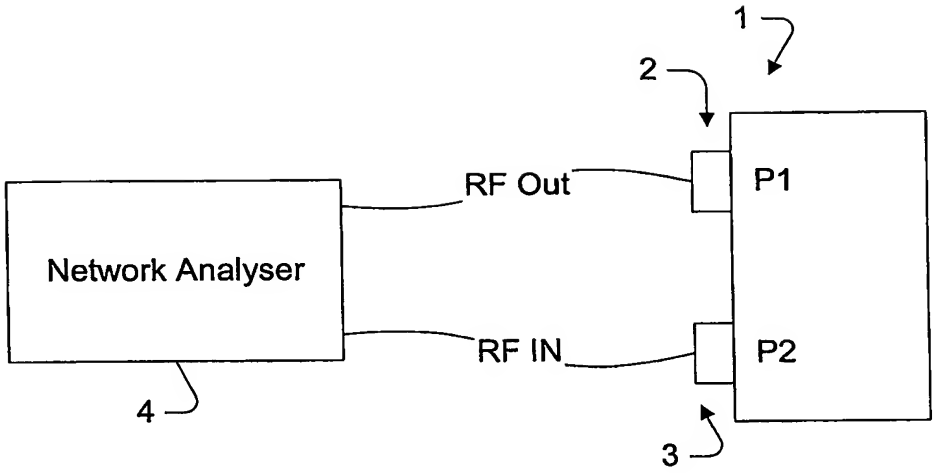

Fig. 1

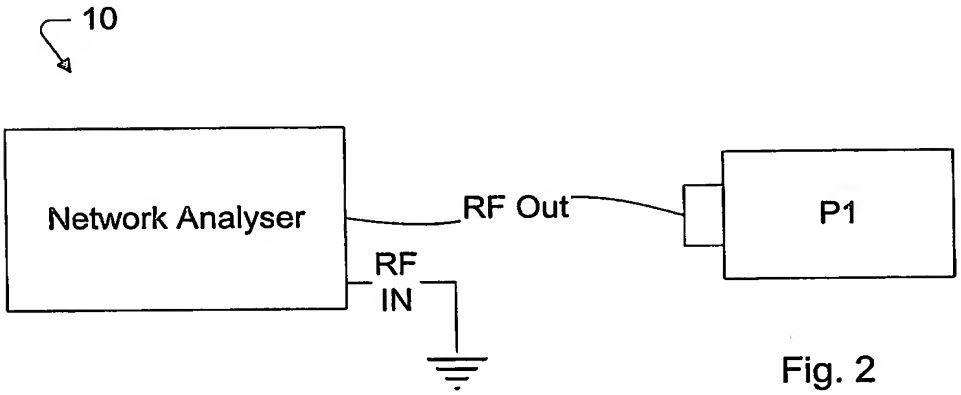

Fig. 2

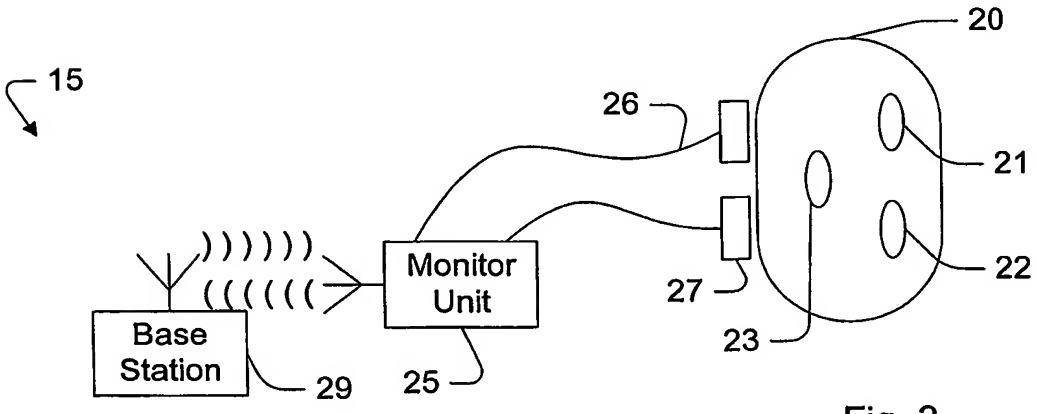

Fig. 3

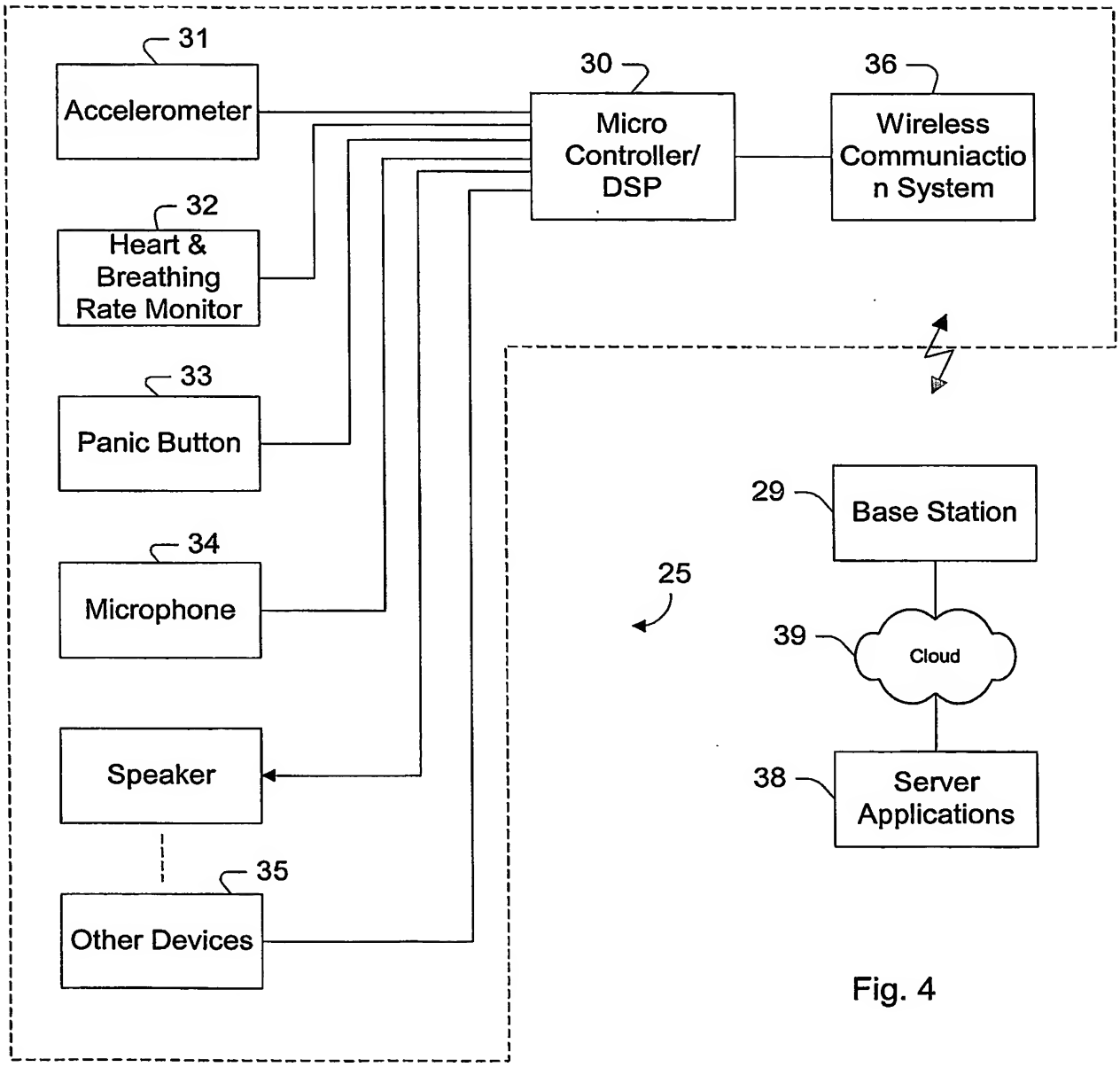
31
Accelerometer
30
Micro Controller/ DSP
36
Wireless Communiactio n System
32
Heart & Breathing Rate Monitor
33
Panic Button
34
Microphone
Speaker
35
Other Devices
25
29
Base Station
39
Cloud
38
Server Applications

Fig. 4

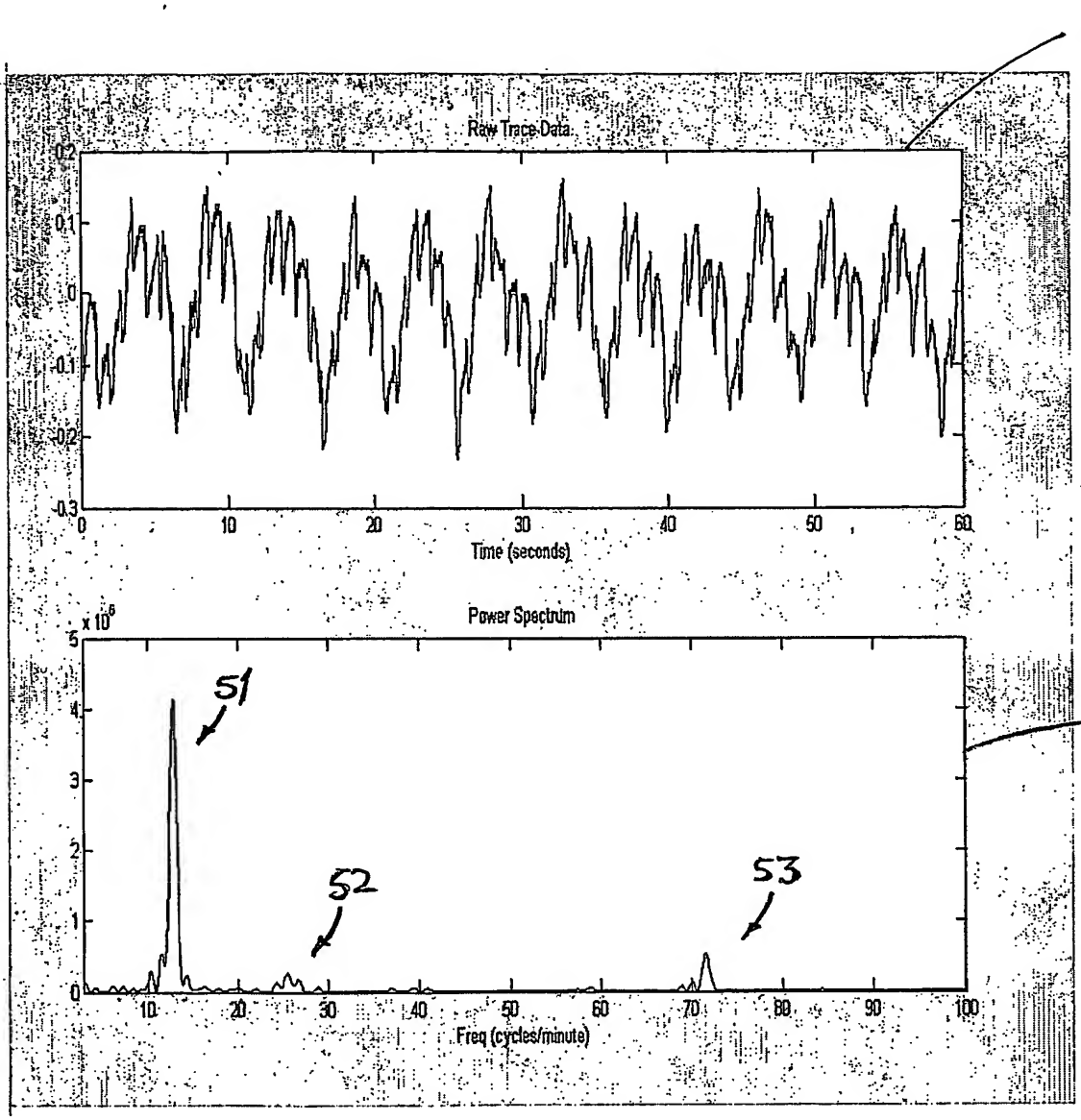
40
Raw Trace Data
Time (seconds)
Power Spectrum
x 10^6
51
52
53
50
Freq (cycles/minute)

Fig. 5

Fig. 6

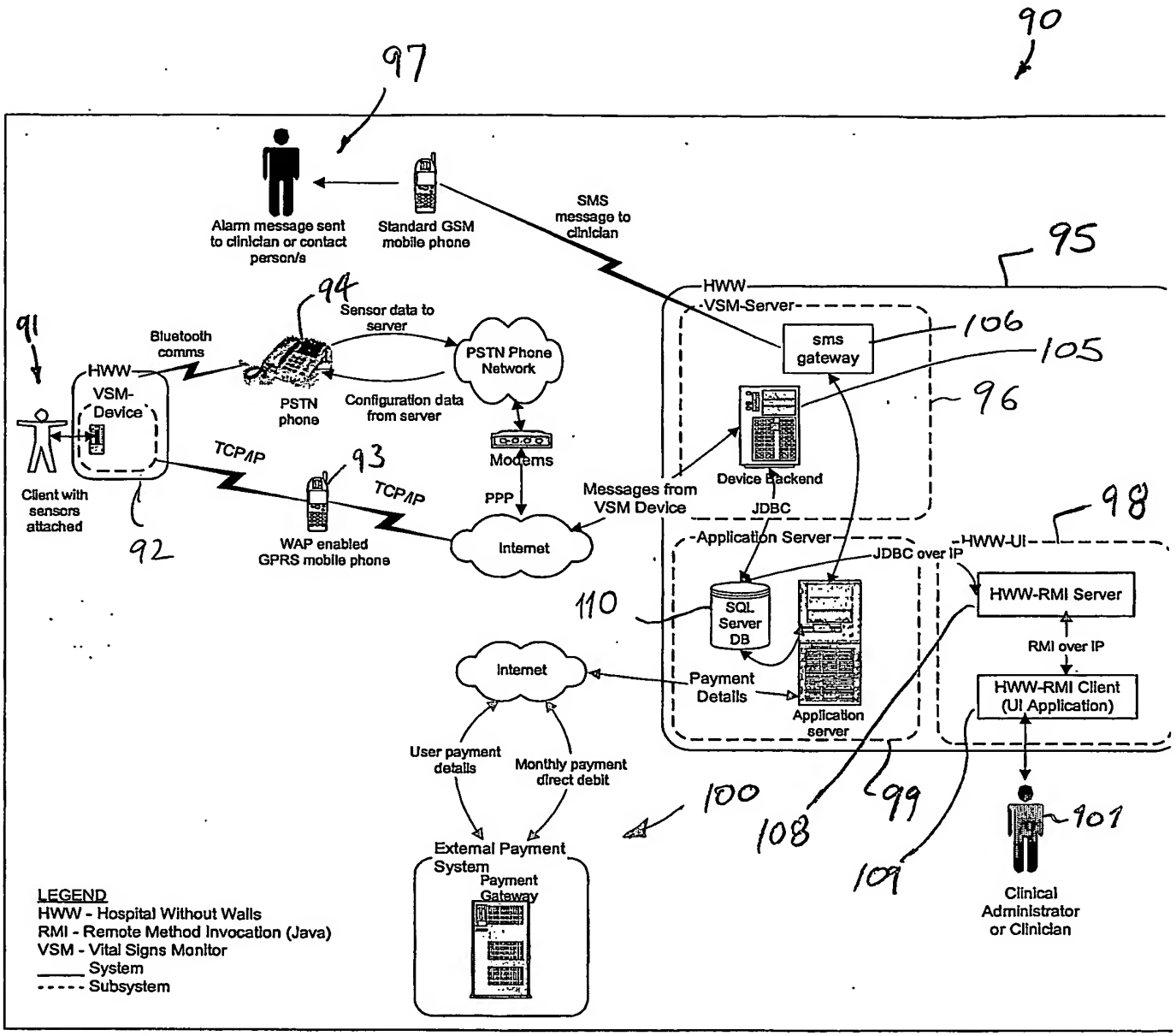
90
97
Alarm message sent to clinician or contact person/s
Standard GSM mobile phone
SMS message to clinician
95
HWW
VSM-Server
sms gateway
106
105
96
94
Sensor data to server
Bluetooth comms
PSTN Phone Network
91
HWW
VSM-Device
PSTN phone
Configuration data from server
Modems
Device Backend
JDBC
Client with sensors attached
TCP/IP
93
TCP/IP
PPP
Messages from VSM Device
98
Application Server
HWW-UI
JDBC over IP
92
WAP enabled GPRS mobile phone
Internet
110
SQL Server DB
HWW-RMI Server
RMI over IP
Internet
Payment Details
Application server
HWW-RMI Client (UI Application)
User payment details
Monthly payment direct debit
100
99
108
101
109
External Payment System
Payment Gateway
Clinical Administrator or Clinician
LEGEND
HWW - Hospital Without Walls
RMI - Remote Method Invocation (Java)
VSM - Vital Signs Monitor
System
Subsystem

Fig. 7

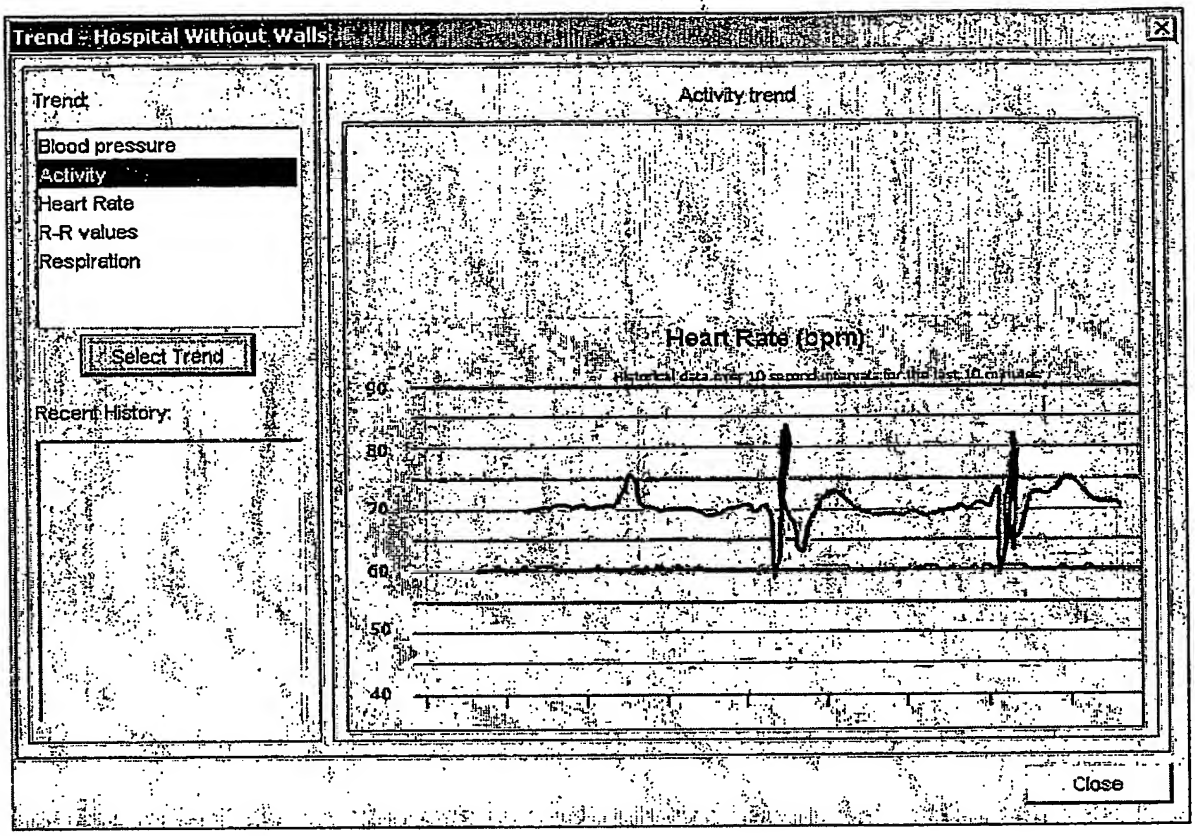

Fig. 9

Date	Time	Tag Name	Alarm Name	Alarm Descripti...	Status	Enabled
Mon May 28 00:...	08:47:18 AM	BHD_RMT_001_...	Device Batt Volts	Low	Acknowledged	false
Sat Jun 09 00:0...	12:40:06 AM	HWW_DEV_001...	Dev Comms	Comms Failure	Unacknowledged	true
Sat Jun 02 00:0...	03:59:05 AM	HWW_PMP_005...	Blood Pressure	High	Unacknowledged	true
Sun May 20 00:...	09:03:40 AM	HWW_DEV_012...	Panic Button	On	Acknowledged	false
Sun May 20 00:...	09:03:38 AM	HWW_PAN_012...	Panic Button	On	Acknowledged	true
Mon May 28 00:...	11:34:21 AM	HWW_DAB_00...	CMF	Comms Failure	Unacknowledged	true
Sat Jun 09 00:0...	09:03:38 AM	HWW_DEV_001...	Fail		Acknowledged	true
Sun May 20 00:...	12:56:59 AM	HWW_DEV_001...	Body Proximity	Off	Acknowledged	true
Sat Jun 09 00:0...	12:40:06 AM	HWW_DEV_001...	Dev Comms	Comms Failure	Unacknowledged	true
Sat Jun 02 00:0...	03:59:05 AM	[illegible]	Blood Pressure	High	Unacknowledged	true
Sun May 20 00:...	09:03:40 A	12...	Panic Button	On	Acknowledged	false
Sun May 20 00:...	09:03:38 A	12...	Panic Button	On	Acknowledged	true
Mon May 28 00:...	11:34:21 A	0...	CMF	Comms Failure	Unacknowledged	true
Sat Jun 09 00:0...	09:03:38 AM	HWW_DEV_001...	Fail		Acknowledged	true
Sun May 20 00:...	12:56:59 AM	HWW_DEV_001...	Body Proximity	Off	Acknowledged	true

Acknowledge
Enable
Disable

Fig. 8

BEST AVAILABLE COPY

BEST AVAILABLE COPY

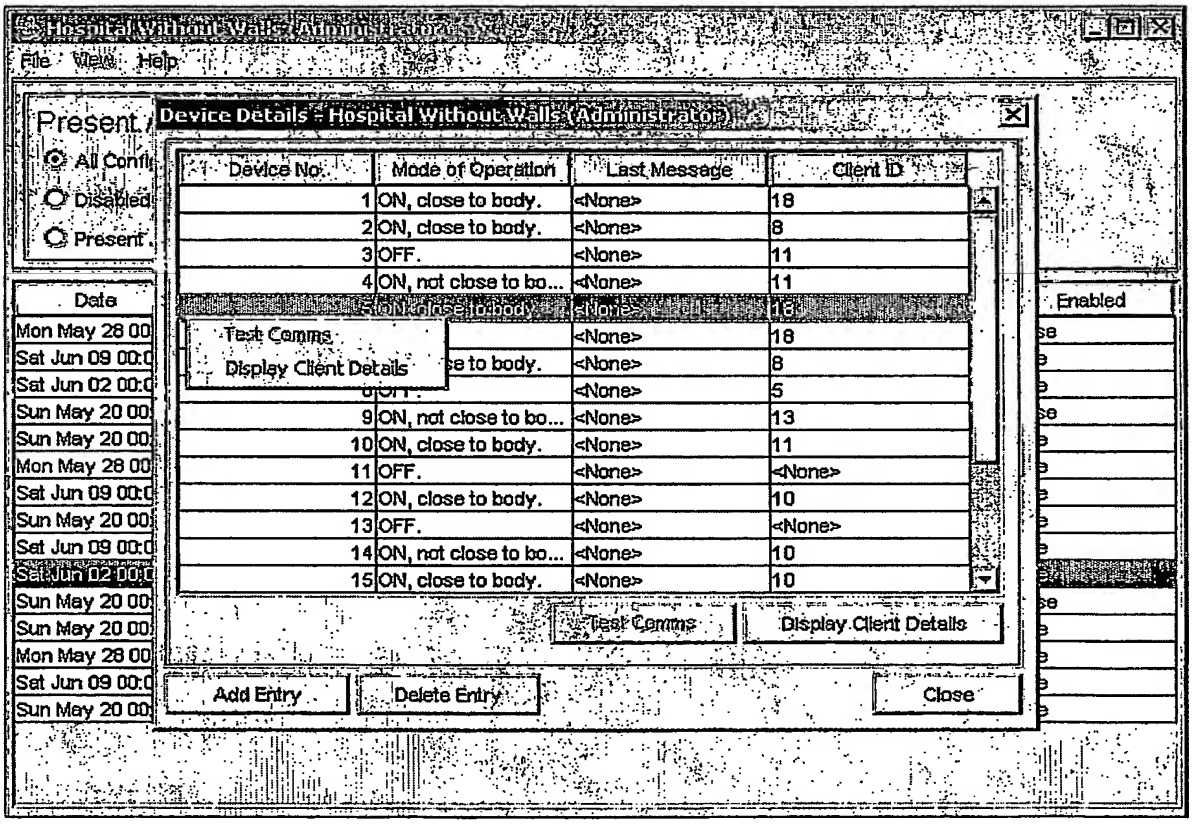

Fig. 10